



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/892,365	06/26/2001	Haim Weissman	000298C1	2777

7590 04/22/2003

QUALCOMM Incorporated  
5775 Morehouse Drive  
San Diego, CA 92121-1714

EXAMINER

TORRES, MARCOS L

ART UNIT	PAPER NUMBER
2683	9

DATE MAILED: 04/22/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	09/892,365	WEISSMAN ET AL.
	Examiner Marcos L Torres	Art Unit 2683

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1) Responsive to communication(s) filed on 07 February 2003 .

2a) This action is FINAL. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4) Claim(s) 1-10 is/are pending in the application.

4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5) Claim(s) \_\_\_\_\_ is/are allowed.

6) Claim(s) 1-10 is/are rejected.

7) Claim(s) \_\_\_\_\_ is/are objected to.

8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) The proposed drawing correction filed on \_\_\_\_\_ is: a) approved b) disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12) The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some \* c) None of:

1. Certified copies of the priority documents have been received.

2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_ .

3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) The translation of the foreign language provisional application has been received.

15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

1) Notice of References Cited (PTO-892)

2) Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_ .

4) Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_ .

5) Notice of Informal Patent Application (PTO-152)

6) Other: \_\_\_\_\_ .

## DETAILED ACTION

### ***Response to Arguments***

1. Applicant's arguments with respect to claims 1-10 have been considered but are moot in view of the new ground(s) of rejection.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 1-2 and 4-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Weissman in view of Shyy.

As to claim 1, Weissman discloses a method for wireless communication, comprising: positioning a first plurality of slave transceivers within a region; positioning a second plurality of slave transceivers within the region in positions spatially separated from the positions of the first plurality of slave transceivers; receiving at the first plurality and at the second plurality of slave transceivers a reverse radio frequency (RF) signal generated by a mobile transceiver within the region and generating respective first and second slave signals responsive thereto; conveying the first and second slave signals to a base station transceiver subsystem (BTS) external to the region; and processing the first and second slave signals conveyed to the BTS so as to recover information contained in the reverse RF signal generated within the region (see col. 6, line 53 – col.7, line 67). Weissman do not specifically disclose conveying slave signals separately to a base station. Shyy discloses conveying signals separately to a base station (see. fig. 5). Therefore, it would have been obvious to one of the ordinary skill in the art at the time of the invention to

As to claim 2, Weissman discloses the method wherein the region is generally unable to receive signals transmitted over the air from the BTS (see col. 6, lines 30-32).

As to claim 4, Weissman discloses the method wherein receiving at the first plurality and at the second plurality of slave transceivers the reverse RF signal

generated by the mobile transceiver and generating respective first and second slave signals comprises down-converting the reverse RF signal so as to generate respective first and second intermediate frequency (IF) signals, and wherein conveying the first and second slave signals separately to the BTS comprises up converting the respective IF signals in a master unit to recover the first and second slave signals (see col. 7, lines 44-55).

As to claim 5, Weissman discloses the method comprising: conveying a forward RF signal from the BTS to a master unit; down-converting the forward RF signal to a forward IF signal; splitting the forward IF signal into a first and a second IF signal; delaying the second IF signal; conveying the first and delayed second IF signals to the first and second plurality of slave transceivers respectively; processing the first and delayed second IF signals to recover the forward RF signal and a delayed forward RF signal respectively; and transmitting the forward RF signal and the delayed forward RF signal to the mobile transceiver (see col. 7, lines 44-67).

6. Claims 3 and 6-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Weissman in view of Shyy as applied to claims 1-2 and 4-5 above, and further in view of Bassirat.

As to claim 3, Weissman discloses everything claimed as explained above except for the method wherein conveying the first and second slave signals separately to the BTS comprises orthogonal polarizing the signals. Shyy discloses conveying signals separately (see fig. 5). Bassirat discloses the method wherein conveying the first and second slave signals to the BTS comprises orthogonal polarizing the signals (see

col. 3, lines 41-62). Therefore, it would have been obvious to one of the ordinary skill in the art at the time of the invention to add the Bassirat teachings to the modified Weissman and Shyy method for enhanced coverage.

Regarding claims 6-10, they are the corresponding apparatus claims of method claims 1-5. Therefore, claims 6-10 are rejected for the same reason shown above.

***Conclusion***

Any response to this Office Action should be mailed to:

Commissioner of Patent and Trademarks  
Washington, D.C. 20231

Or faxed to:

(703) 308-6306

For formal communication intended for entry, informal communication or draft communication; in the case of informal or draft communication, please label "PROPOSED" or "DRAFT"

Hand delivered responses should be brought to:

Crystal Park II  
2121 Crystal Drive  
Arlington, VA  
Sixth Floor (Receptionist)

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marcos L Torres whose telephone number is 703-305-1478. The examiner can normally be reached on 8:00am-5:30pm alt. friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William G Trost can be reached on 703-305-5318. The fax phone numbers

for the organization where this application or proceeding is assigned are 703-872-9314 for regular communications and 703-872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-4700.

Marcos L Torres  
Examiner  
Art Unit 2683

MLT  
April 16, 2003



WILLIAM TROST  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600